

Application No. 09/669,118
Preliminary Amendment dated December 22, 2005
Reply to Office Action of August 24, 2005

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (Currently Amended) A digital camera comprising:
 - an image sensor disposed at a position at which an image is to be formed by a taking lens;
 - a recorder for recording on a recording medium an image sensed by said image sensor in accordance with recording instructions;
 - a semitransparent mirror which rotates about an axis in a direction perpendicular to the optical axis of the taking lens so as to move between an advanced position intersecting at an inclination an optical path from the taking lens to the image sensor for photographing in a first photographic mode where a first portion of the light transmitted by the taking lens is reflected by the semitransparent mirror and a second portion of the light transmitted by the taking lens forms an image on the image sensor, and a retracted position removed from the optical path for photographing in a second photographic mode where substantially all of the light transmitted by the taking lens forms an image on the image sensor; and
 - an optical finder providing an image by directing the light reflected by said semitransparent mirror set at the advanced position from the taking lens to the eye of a user.
2. (Original) A digital camera according to claim 1, wherein said semitransparent mirror is a quick return mirror.
3. (Original) A digital camera according to claim 1, wherein said image sensor is movable between a first position and a second position, and said image sensor is positioned in the first position when said semitransparent mirror is in the retracted position

and positioned in the second position when said semitransparent mirror is in the advanced position, wherein the second position with said semitransparent mirror intersecting the optical path and the first position without said mirror are optically equivalent with each other.

4. (Original) A digital camera according to claim 3, wherein the first position and the second position are set so as to equalize the optical path length from the taking lens directly to said image sensor when said semitransparent mirror is set at the retracted position, and the optical path length from the taking lens through said semitransparent mirror to said image sensor when said semitransparent mirror is set at the advanced position.

5. (Original) A digital camera according to claim 3, wherein the first position and the second position are set so as to equalize the imaging position of an image formed by the taking lens directly on said image sensor when said semitransparent mirror is set at the retracted position, and the imaging position of an image formed by the taking lens through said semitransparent mirror on said image sensor when said semitransparent mirror is set at the advanced position.

6. (Original) A digital camera according to claim 1 further comprising a driver for moving the taking lens between a first position and a second position in a direction along the optical path, the first position and the second position are set so as to equalize the optical path length from the first position directly to said image sensor when said semitransparent mirror is set at the retracted position, and the optical path length from the second position through said semitransparent mirror to said image sensor when said semitransparent mirror is set at the advanced position.

7. (Original) A digital camera according to claim 1, wherein said digital camera is controllable under a first photographic mode wherein said semitransparent mirror is set at the advanced position until recording is instructed, and set at the retracted position when recording has been instructed, and returns to the advanced position again

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when said image sensor completes the sensing of the image, and a second photographic mode wherein said semitransparent mirror is set at the advanced position regardless of whether or not the recording is instructed.

8. (Original) A digital camera according to claim 1 further comprising a display for displaying an image sensed by said image sensor.

9. (Original) A digital camera according to claim 8, wherein said digital camera is controllable under a first photographic mode wherein said semitransparent mirror is set at the advanced position until recording is instructed, and set at the retracted position when recording has been instructed, and a second photographic mode wherein said semitransparent mirror is set at the retracted position regardless of whether or not the recording is instructed.

10. (Previously Presented) A digital camera comprising:
an image sensor disposed at a position at which an image is to be formed by a taking lens; and

an optical element movable between an advanced position intersecting at an inclination an optical path from the taking lens to said image sensor, and a retracted position removed from the optical path,

wherein said digital camera is controllable under a first photographic mode wherein said optical element is set at the advanced position for photography, said image sensor receiving said image through the semitransparent mirror in said advanced position, and a second photographic mode wherein said optical element is set at the retracted position for photography, said image sensor receiving said image from said taking lens in the retracted position, and the optical path lengths from the taking lens to said image sensor are equalized in the first photographic mode and the second photographic mode by moving the taking lens in a direction along the optical axis of the taking lens.

11. (Original) A digital camera according to claim 10, wherein said optical element is at least a single element for photography.

12. (Original) A digital camera according to claim 11, wherein said optical element is at least one of semitransparent mirror, infrared cutting filter, spatial modulation element and ND filter.

13. (Original) A digital camera according to claim 10, wherein said optical element is moved between the advanced position and the retracted position by rotation.

14. (Original) A digital camera according to claim 10, wherein said optical element is moved between the advanced position and the retracted position by a movement other than rotation.

15. (Original) A digital camera according to claim 10, wherein said image sensor is movable between a first position and a second position, and said image sensor is positioned in the first position when said optical element is in the retracted position and positioned in the second position when said optical element is in the advanced position, wherein the second position with said optical element intersecting the optical path and the first position without said optical element are optically equivalent with each other.

16. (Original) A digital camera according to claim 15, wherein the first position and the second position are set so as to equalize the optical path length from the taking lens directly to said image sensor when said optical element is set at the retracted position, and the optical path length from the taking lens through said optical element to said image sensor when said optical element is set at the advanced position.

17. (Original) A digital camera according to claim 15, wherein the first position and the second position are set so as to equalize the imaging position of an image formed by the taking lens directly on said image sensor when said optical element is set at the retracted position, and the imaging position of an image formed by the taking lens through said optical element on said image sensor when said optical element is set at the advanced position.

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18. (Currently Amended) A digital camera comprising:
- an image sensor disposed at a position at which an image is to be formed by a taking lens;
- a recorder for recording on a recording medium the image sensed by said image sensor in accordance with recording instructions;
- a semitransparent mirror which rotates about an axis in a direction perpendicular to the optical axis of the taking lens so as to move between an advanced position intersecting at an inclination the optical path from the taking lens to the image sensor so that a first portion of the light transmitted by the taking lens is reflected by the semitransparent mirror and a second portion of the light transmitted by the taking lens forms an image on the image sensor, and a retracted position removed from the optical path so that substantially all of the light transmitted by the taking lens forms an image on the image sensor;
- an optical finder providing an image by directing the light reflected by said semitransparent mirror at the advanced position from the taking lens to the eye of a user; and
- a display portion which displays the image sensed by said image sensor, said display portion displaying the image which is formed at the image sensor with second portion of the light transmitted through the semitransparent mirror at the advanced position from the taking lens.

19. (Previously Presented) A digital camera according to claim 18, wherein said image sensor is movable between a first position and a second position, and said image sensor is positioned in the first position when said semitransparent mirror is in the retracted position and positioned in the second position when said semitransparent mirror is in the advanced position,

wherein the second position with said semitransparent mirror intersecting the optical path and the first position without said mirror are optically equivalent with each other.

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20. (Previously Presented) A digital camera comprising:
 - an image sensor disposed at a position at which an image is to be formed by a taking lens; and
 - an optical element movable between an advanced position interposed at an inclination in an optical path from the taking lens to said image sensor, and a retracted position where the optical element is not interposed in the optical path from the taking lens to the image sensor,
 - wherein said digital camera is controllable under a first photographic mode wherein said optical element is set at the advanced position for photography, and a second photographic mode wherein said optical element is set at the retracted position for photography, and the optical path lengths from the taking lens to said image sensor are equalized in the first photographic mode and the second photographic mode by moving the image sensor.